

CONSERVATION COMMISSION
STATE OF NEW YORK

BREEDING MALLARD DUCKS
FOR PROFIT

BY
W. T. HORNADAY
AND
LEE S. CRANDALL

ALBANY, NEW YORK, 1912

Reprinted 1915

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ALBANY

GEORGE D. PRATT, Commissioner

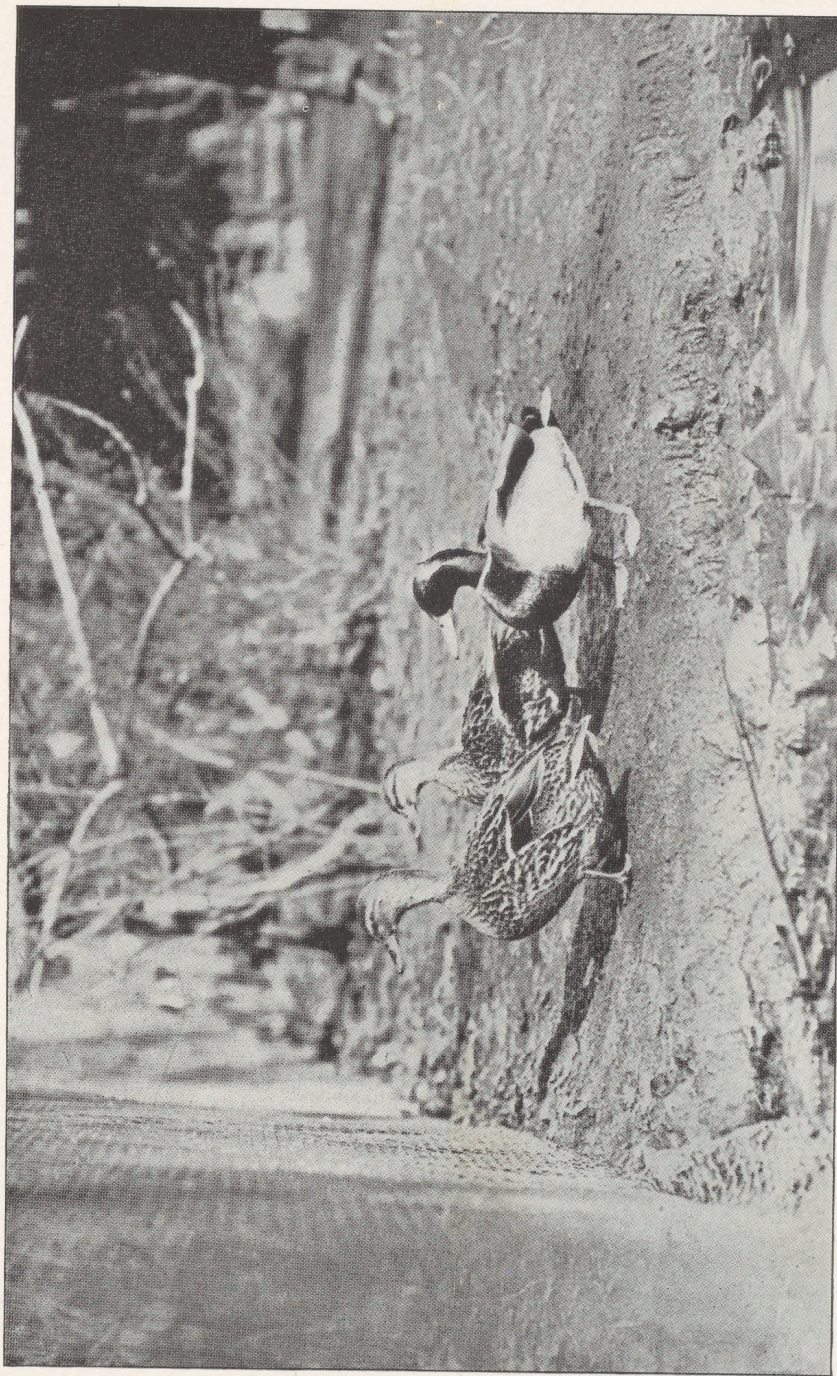
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Deputy Commissioner

MARSHALL McLEAN, Deputy Attorney General

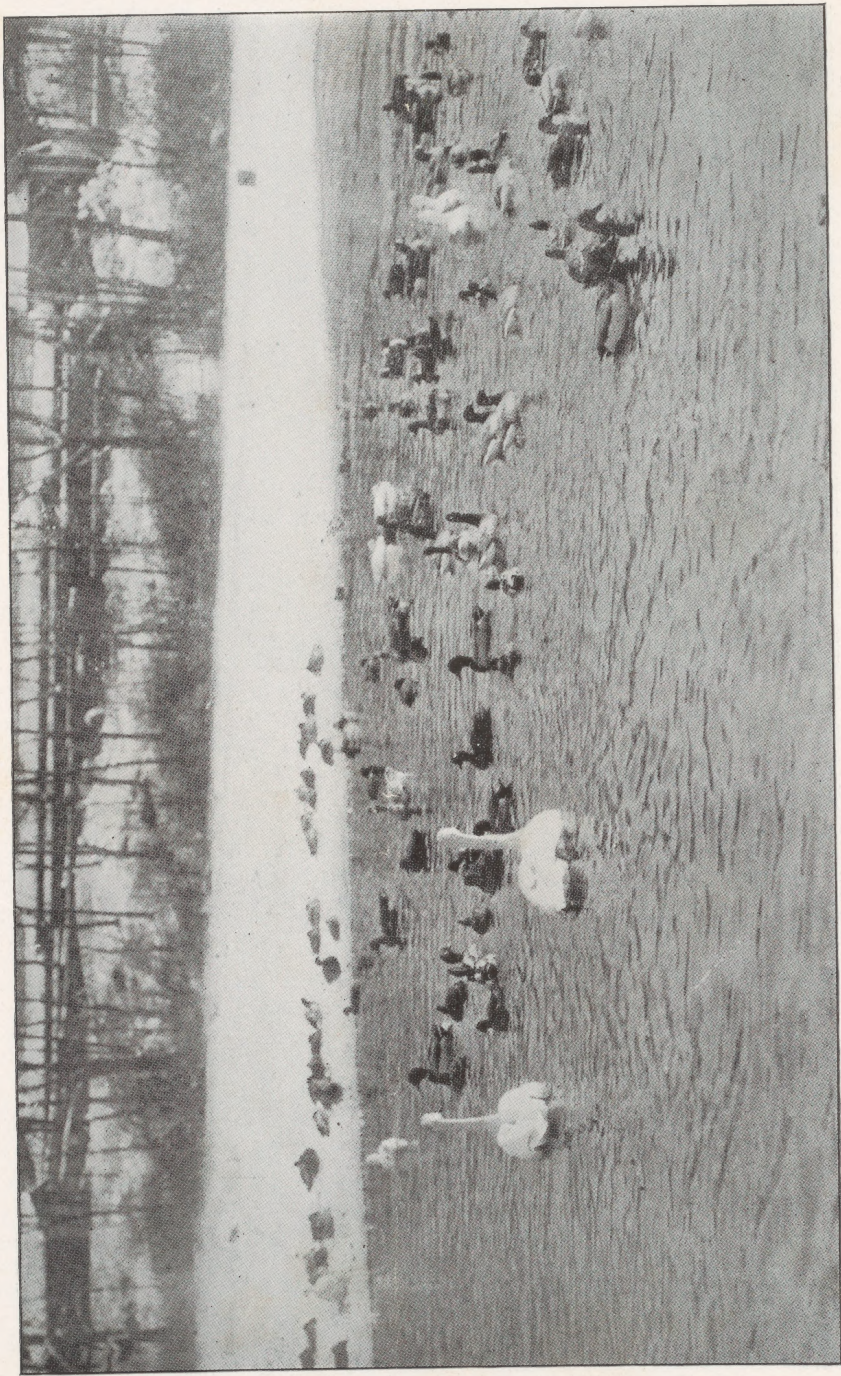
DIVISION OF FISH AND GAME

LLEWELLYN LEGGE, Chief



From the N. Y. Zoological Society

Mallard Ducks, Male and Female



Waterfowl in Winter, in the Zoological Park

BREEDING MALLARD DUCKS FOR PROFIT

BY W. T. HORNADAY AND LEE S. CRANDALL

In endeavoring to supply, at short notice, the need of the State Conservation Commission for a paper on the breeding of mallard ducks, we do not advance the idea that we think we know *all* that there is to know about this subject. On the contrary, we regard the subject as one in which much remains to be discovered by those who propose to rear ducks on a commercial basis; and we offer only what we have learned in the New York Zoological Park by duck-breeding which was not done on a cash-producing basis. In the breeding of ducks for park purposes, our Bird Department has been very successful; and we now offer, for the benefit of the public, the results of our experience. We must also add that it is physically impossible for us to amplify these notes through the laborious channel of correspondence.

Of all American ducks the common Mallard (*Anas platyrhynchos*) is the most persistent and successful breeder. It quickly becomes accustomed to captivity, it enjoys park life, and when given even half a chance, it will breed and rear its young. Its nearest relative, the Black Duck (*Anas rubripes*) is of similar size and desirability as a food duck, but its difference in temperament is a serious obstacle to its propagation on a commercial basis. The black duck is more nervous and shy than the mallard, and its breeding is too easily interrupted.

Unquestionably, the mallard duck can be reared in captivity in numbers limited only by the extent of breeder's facilities. The amount of net profit that can be realized depends wholly upon the business acumen and judgment displayed in the management of the flock. The total amount of knowledge necessary to success is not so very great; but at the same time, the exercise of a fair amount of intelligence, and also careful diligence, is absolutely necessary. Naturally, the care and food of the flock must not cost extravagantly, or the profits will inevitably disappear.

THE POND

Fortunately, for mallard breeding an elaborate or costly plant is not necessary. The three things that are absolutely indispensable are a pond, a bit of meadow, and a certain amount of brush-covered ground, or a tract of rank grass.

The main reason for the pond is obvious—to keep the birds clean and in good health. Any farm that is traversed by a running brook is eligible for duck-farming operations. In case a pond does not exist, one can easily be made. A large pond will last a long time without being emptied and cleaned; but if the pond must be a small one, then the owner should establish it on such a basis that it can easily be emptied and thoroughly cleaned. For a small pond, the ideal bottom is one covered with concrete, so that the work of cleaning is rendered both easy and effective. If a pond has a gravelly bottom, it does not require any concrete; but a bottom of black earth, or swamp muck, should be paved in some manner, at the earliest moment. In constructing a pond for aquatic birds or mammals, its bottom should slope toward the outlet in such a manner that when the outlet is opened, the entire area will be quickly drained.

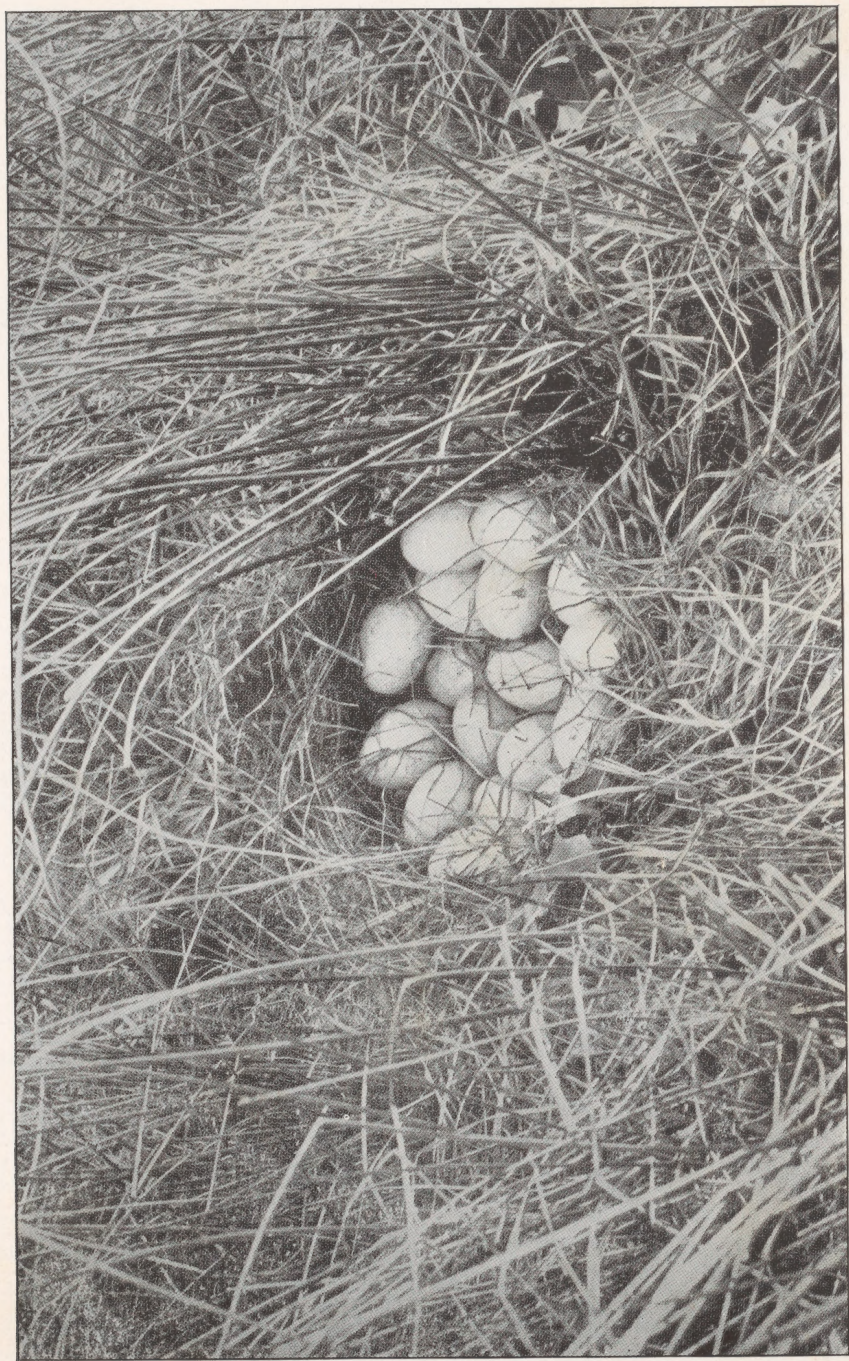
So long as the water in a pond can be kept reasonably clean, it will support a really large population of ducks. Although we never have tested the matter, we believe that in commercial duck-raising it will be sufficient to allow two square yards (18 square feet) of water surface to each duck. Thus a pond 100 feet square would be sufficient for 555 ducks. It is to be carefully noted, however, that the water is to be kept reasonably clean; which means that a deep layer of excretions must not be allowed to accumulate on the bottom. It is understood that rarely, if ever, will all the ducks of a flock occupy the pond at the same time.

After the pond has been formed, the next step is to plant a large portion of the enclosure with thick cover, the most suitable plants for the purpose being willows, privet, etc. If plenty of tangled brush is provided, mallards will nest freely on the ground in sheltered nooks. It is always well, however, to supply a number of bottomless boxes about 15 inches square, laid on the ground, with an opening near the bottom large enough to permit the entrance of the bird.

If a natural pond or lakelet exists, of many acres in extent, an attempt should be made to induce the growth of various aquatic plants suitable for duck-food, such as wild celery (*Vallisneria*), wild rice (*Zizania*), duck weed (*Lemna*) and pond-weed (*Potamogeton*). If the pond is very small, or the number of ducks large, such plants will not be able to hold their own, and their introduction will be a waste of time. Of course in ponds that are periodically emptied and cleaned, plant life is impossible. In such cases, green food in some form must be provided, such as finely chopped fresh grass, cabbage or lettuce.



Nest of Mallard Duck Hidden in Rank Grass



Nest and Eggs of the Mallard Duck

BREEDING STOCK

And now as to the breeding stock. Pure wild birds can be obtained from any of the reliable dealers in live water-fowl, at prices ranging from three dollars to five dollars per pair, according to the season and the supply. Stock can be obtained of Wenz & Mackensen, Yardley, Pa.; G. D. Tilley, Darien, Conn.; J. W. Whealton, Chincoteague Island, Va.; Cecil French, Washington, D. C.; K. C. Beck & Company, Hutchinson, Kan., and others.

If the pond and its enclosure is small, one drake to three or four ducks is sufficient. If the pond is of good size, one drake to two ducks is a safer proportion.

When the birds arrive, they should be confined for at least a day or two in a dry enclosure, until they have recovered from the effects of the journey, and are feeding well. When several days have been spent in transit, the quarantine must be of longer duration. Then, if they are already pinioned, they may be turned upon the pond. In case they are not pinioned, two courses are open. If it is nearly breeding time, the wings should simply be clipped, and the birds librated, to be caught and pinioned *after* the laying season. Pinioning at this time might so upset the birds as to very materially affect their laying. If the nesting season is not at hand, the birds should be pinioned at once.

PINIONING

Pinioning is desirable and necessary to keep mallards from flying away; also to render it possible to catch them easily. The process is very simple, easily performed, and almost invariably successful. A careful study of the accompanying illustrations will make detailed explanations unnecessary. The ninth and tenth primary wing feathers, counting from the outside, should be removed, together with their "coverts," and the small feathers which clothe the wing at the point of insertion of the primaries. A tight ligature of stout, uncolored twine should then be tied about the wing, as close as possible to the junction with the thumb or bastard wing, on the side toward the tip. The ligature must be tight, a good knot for the purpose being shown in the illustration. The skin over the bone is severed, and the bone is then cut through, cleanly and evenly, at a point about a quarter of an inch beyond the ligature. The best instrument for this purpose is a strong pair of gardener's pruning shears, costing 75 cents. After the operation the bird may be returned to the water at once. If the operation has been properly performed, small loss of blood and none of life is to be feared.

FOOD

The birds should be fed once or twice daily on a mixture of wheat, buckwheat and barley, a little cracked corn being added during cold weather. Any soft food is eaten greedily, but there is no advantage to be gained by feeding it to healthy birds. Green food, also, should be given, as described above.

During the winter months, no shelter is required unless the weather be exceedingly severe. If the number of ducks is fairly large, they will keep open a place in the ice by their constant swimming; but if they fail to do this, the ice must be cut for them. It is open water that enables waterfowl to keep their feet from freezing. If the temperature is very low, or the flock small, it will be necessary to open a hole in the ice at least once daily. It is a simple manner to erect low shelters of brush or straw to break the wind, if needed; but no houses of any kind are necessary.

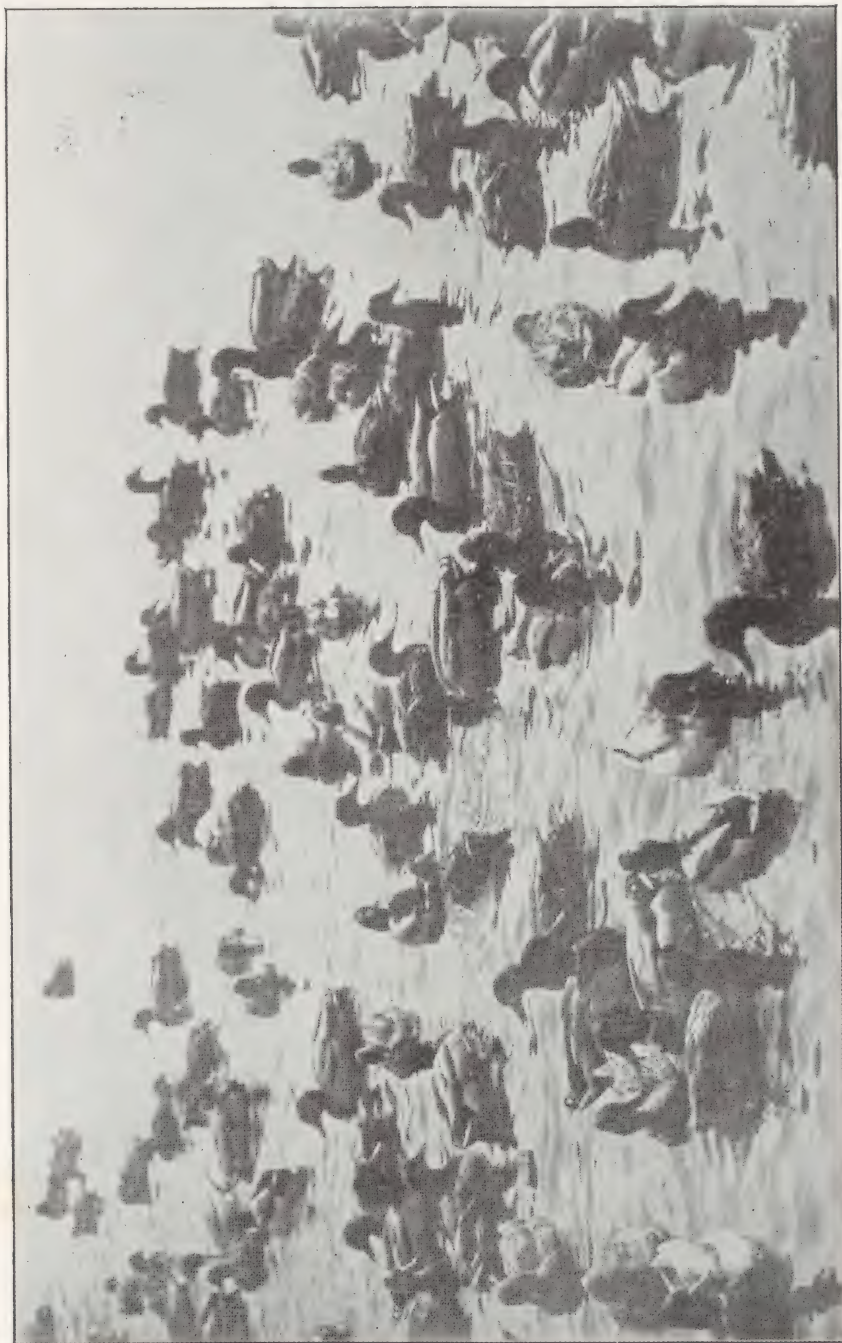
If the duck yard is specially exposed to the full sweep of the piercingly cold western and northwestern winds of our northern winter, then it will be well to erect, as a wind screen, a tight board fence, six feet in height, along the western side of the duck enclosure.

BREEDING

We know of but one profitable method to be followed in rearing the young. A few ducklings can be brought to maturity by allowing the duck to hatch and rear her own brood, but the losses from exposure and lack of regular and proper food make this method uncertain and impractical. When the ducks begin laying, great care must be taken not to disturb them. The eggs should be collected daily by the same person, and set under small hens, or placed in incubators. During the period of incubation, the eggs must be sprinkled frequently with warm water to keep them sufficiently moist.

CARE OF DUCKLINGS

For the first twenty-four hours after hatching, the ducklings require no food or water. On the second day they should be placed in a brooder, or removed, with the hen that hatched them, to a dry, shady run, as nearly as possible impervious to vermin and cats. If natural shade is not sufficiently abundant, an artificial substitute must be provided. Temporary shade can be secured by stretching burlap on wooden frames. If possible, every runway should be well carpeted with short, tender grass of which the young birds will



Mallard Ducks in the New York Zoological Park



Female Mallard on Her Nest

Courtesy of the New York Zoological Society

consume a great quantity. At first the food of ducklings should consist of a soft mixture of meals, such as is supplied by Spratts' Patent and other concerns. If this be not available, an efficient substitute may be made by mixing equal parts of middlings, barley meal and beef scraps, or crissel. The food should be scalded, mixed, and served as a crumbly mass, but not sloppy, and it should be doled out in small quantities at frequent intervals. Fine grit should be supplied in the form of clean sand or similar material. If the range be sufficiently large, the ducklings will add a great number of earthworms and insects to the menu.

Inasmuch as young ducklings should be reared away from the pond, pure water for drinking purposes should be supplied; and its depth should never exceed one inch. Convenient vessels for this purpose are sold by all poultry supply houses. Great care must be taken to prevent the water from becoming heated by exposure to the sun's rays.

When about one week old, all the young birds should be pinioned by removing the tip of one wing, the incision being made at a point about one-eighth inch beyond the thumb, as fully described and illustrated for adults. For ducklings, however, no ligature is required, as there is no bleeding. The wound may be dusted with some good antiseptic powder, such as xeroform, to prevent blowing by flies.

At the age of about six or seven weeks, the food of ducklings may be gradually changed to small grain. At this time, also, they may be turned upon the pond; and when they have become thoroughly accustomed to the grain, they may well be considered as safely reared.

ENEMIES

Undoubtedly, the worst enemies of young ducklings are cats and rats. Cats are sly robbers, hard to detect, and their abundance in a semiwild state is increasing yearly. All wandering cats should be killed. Rats are determined and bloodthirsty vermin, and often they work for some time before their depredations are discovered. Cats, rats, mink and weasels must be kept down by means of traps, guns, and poison if necessary.

Crows will greedily take small ducklings, and eggs; and sharp-shinned and Cooper's hawks are ever ready to carry off the young birds. Snapping turtles, and such fish as pike, pickerel and bass, if allowed to live in a duck pond, will seize and devour a great many ducklings, and even attack the adult birds. All such aquatic scourges must be carefully kept out of duck-ponds.

MARKETING THE SURPLUS

The New York market always desires mallard ducks that can legally be sold and served, and it always will. The prospects are that the extra value attaching to the mallard on the bill-of-fare will make the raising of mallards much more profitable to the breeder than the rearing of the common domestic duck. Breeders should count upon disposing of their stock through the game and poultry dealers of New York, Albany, Buffalo and other large cities, because the hotels and restaurants of the cities are the natural consumers of high-priced meats.

All preserve-bred mallard and black ducks must be killed and officially tagged in accordance with the regulations of the State Conservation Commission. Breeder can depend upon it that a very little trouble on their part will suffice to place all these operations on a thoroughly practical and sensible working basis. It is not possible for preserve-bred ducks to be killed by shooting when they are to be sold as food, because every large duck-pond, well populated with mallard ducks, attract annually a certain number of wild ducks which under no circumstances can be shot according to the law, and marketed. Preserve-bred ducks must be caught and killed by hand; and pinioning renders this easily possible.

There are a few persons who claim that it is unsportsmanlike to kill a mallard duck "by hand;" but to this we reply that it is ten times more unsportsmanlike to shoot *tame*, preserve-bred mallards as they fly from their coops to their pond!



How the Tie is Made

How to Pinion Ducks
 Inside View of a Mallard's Wing, Showing Amputation and Tie.
 Amputated Bones Exposed



How to Pinion Ducks
Top View of a Mallard's Wing

